

Remarks

Claims 2 and 8 are canceled. Claims 1, 3 and 18 are currently amended. Claims 4-7, 9-17 and 19-25 are original claims. Claim 8 has been recast as new independent claim 26. Review and reconsideration of the application in view of these amendments and the following remarks is respectfully requested.

Claim rejections- 35 U.S.C. 103(a):

Claims 1-7 and 9-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al. (U.S. Patent No. 6,598,932) in view of Catanzarite et al. (U.S. Patent No. 6,070,681). Claim 2 has been canceled and therefore is removed from consideration. For the following reasons, claims 1, 3 and 8 as amended, and claims 4-7 and 9-17 depending from claim 1, are not anticipated by these references.

Each of the Gross et al. and Catanzarite et al. references fails to disclose or suggest a cab suspension system including a strut that combines a damper with an air spring in a single component and that distributes a bending moment applied to the ends of the strut. In addition, neither reference discloses or suggests such a strut used in combination with a height sensor and controller.

Catanzarite et al. discloses a controllable cab suspension in which a magnetorheological (MR) damper is separate from an air spring, rather than a strut that integrates a damper and an air spring into a single component. Furthermore, the suspension disclosed in Catanzarite et al. includes an additional linkage 56b (Fig. 4) that attaches between bracket assemblies 55b and 55b' to restrain lateral movement. Although Catanzarite et al. discloses a position (or height) sensor 30 and controller 36 (Fig. 2) for measuring the distance between the cab and frame in order to selectively pressurize the air spring and/or energize the damper, the novel combination of a position sensor, a controller, and a strut having a damper and an air spring integrated into a single

component and that resists bending moments applied to the ends of the strut is not disclosed or suggested.

Gross et al. discloses a strut in Fig. 3 that includes a hydraulic damper 14 and an air spring 9. The damper 14 includes a vessel tube 27 that is attached to the frame, and a piston rod 31 that is attached to the cab. An outer tube 19 is attached to the piston rod 31 and is concentric to the vessel tube 27, although no portion of the outer tube 19 encompasses a portion of the vessel tube 27. The vessel tube 27 retains a concentrically mounted roll tube 23. An air spring bellows 21 is attached to the outer tube 19 and the roll tube 23 to define a spring space 29 that may be pressurized with air. An element 23a (not defined in the written description) appears to be an annular gap between the vessel tube 27 and the roll tube 23. An element 23b (also not defined in the written description) appears to be a cross-sectional view of a compression spring, as evidenced by a ground coil end on its upper portion, and is retained in the annular gap. The function of element 23b is apparently to bias a guide path 39 in the upward direction for proper functioning of a control valve 15. The strut as disclosed in the Gross et al. reference cannot distribute a bending moment applied to the ends of the strut, and therefore cannot independently resist relative lateral movements between the cab and the frame. The suspension in the Gross et al. reference necessarily requires an additional component, a stabilizer 7 (Fig. 1), arranged transverse to the vehicle frame to oppose the lateral/roll movements of the cab. Furthermore, the use of a position (or height) sensor and a controller, in combination with such a strut is not disclosed or suggested in the Gross et al. reference.

However, the cab suspension system defined in amended claim 1 includes a strut that combines a damper and an air sleeve into a single component and a bearing sleeve that resists a side-load force and/or bending moment applied to the ends of the strut, such that the strut better resists relative lateral movements between the cab and the frame. Further, the bearing sleeve may distribute a bending moment applied to ends of the strut.

It is asserted that Gross et al. discloses a bearing sleeve in the form of "roller bearing 23a" allegedly shown in Fig. 3. This is not the case. Rather, element 23a appears

to be a gap formed in roll tube 23 that receives a helical coil spring 23b that supports control element 37. Moreover, Gross et al. does not state, and it is not seen how, coil spring 23b seated in gap 23a would act to resist a bending moment applied to the ends of the damper. Gross et al. does not teach or suggest the use of a bearing sleeve in the combination of amended claim 1 to resist bending moments applied to the ends of the strut. Accordingly, the cab suspension system as defined in amended claim 1 eliminates the need for the linkage disclosed in Catanzarite et al., and the stabilizer disclosed in Gross et al.

The proposed combination of Catanzarite et al. and Gross et al. does not teach or suggest the structure of amended claim 1. Consequently, amended claim 1 should now be allowed. Claims 3-17 depend from amended claim 1 and therefore are allowable for at least the same reasons.

Claims 18-25 also stand rejected as being unpatentable under 35 U.S.C. §103(a) over Gross et al. in view of Catanzarite et al. Amended claim 18 includes a strut having a bearing sleeve and a three-point connection adapted to interconnect the cab and the frame, whereby the three-point connection resists lateral movement between the cab and the frame. Neither Gross et al. nor Catanzarite et al. discloses a suspension system in which a strut is adapted to resist lateral movement without an additional component (i.e., a stabilizer or a linkage) attached to the frame. Therefore, for at least this reason, amended claim 18 should be allowed. Claims 19-25 depend from amended claim 18 and therefore are also allowable.

Allowable subject matter:

Claim 8 was objected to as being dependent upon a rejected base claim, but is indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 8 is recast as new claim 26 and therefore new claim 26 should be allowed.

In view of the foregoing arguments and amendments, the application appears in condition for allowance and formal notice thereof is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'Theodore D. Lienesch', written over a horizontal line.

Theodore D. Lienesch,
Reg. No. 28,235

THOMPSON HINE LLP
2000 Courthouse Plaza NE
P.O. Box 8801
Dayton, Ohio 45401-8801
(937) 443-6958